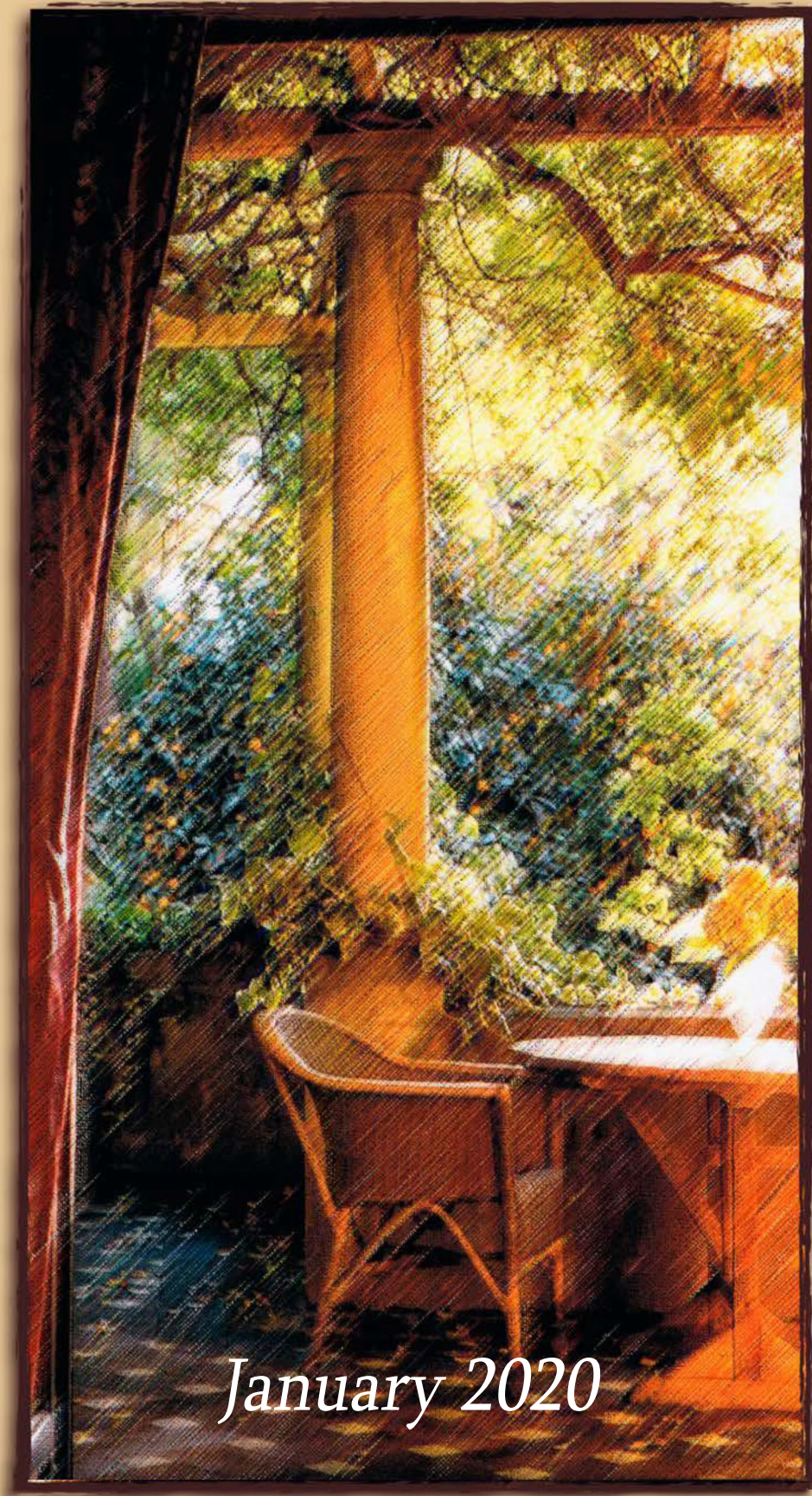


# OTAY RANCH RESORT VILLAGE

ALTERNATIVE H



*January 2020*

PRESERVE EDGE PLAN



# The Otay Ranch Resort Village Alternative H Preserve Edge Plan

GPA 04-03, SP 04-002, REZ 04-009, TM 5361,

ER# 04-19-005



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## Preserve Edge Plan

### 1. Purpose

The purpose of the Otay Ranch Resort Village Alternative H Preserve Edge Plan is to identify allowable uses within appropriate land use designations for areas adjacent to the Otay Ranch Preserve. In accordance with Policy 7.2 of the Otay Ranch Resource Management Plan Phase One and Phase Two (RMP-1 and RMP-2), an edge plan is to be developed for all Specific Plans that contain areas adjacent to the Preserve. The edge plan area is a publicly or privately owned, 100-foot wide strip of land adjacent to the Preserve. To provide further guidance relating to the content of the Edge Plan, the Multiple Species Conservation Program (MSCP) County Subarea Plan contains policies related to land use adjacency.

The Otay Ranch Resort Village Alternative H land plan includes uses within the 100-foot Preserve Edge. These include a perimeter trail, storm drain inlets for upstream waters, the 100-foot Fuel Modification Zone, public streets, and a road and water line between the water tank and the development area (northwest portion of the site). These uses are allowed per the RMP-1, RMP-2, and the MSCP and have been designed to be a least impactful as practical.

### 2. Compliance with the MSCP County Subarea Plan Policies

The MSCP County Subarea Plan, Chapter 1, Section 1.10 (Land Uses Adjacent to the Preserve) addresses land uses adjacent to the MSCP Preserve and states:

“Residential uses will be the most common uses located adjacent to the preserve, although roads, manufactured open space, recreational facilities, and industrial and commercial uses will occur in some areas. The following section establishes guidelines for those uses that are compatible with the preserve. The subsequent section (1.11), along with area specific management directives outlined in the subsequent chapters, establishes a brush management zone that will separate the preserve from developed uses.

The following uses are also allowed on land adjacent to the preserve with no limitations other than subject to the guidelines listed in paragraphs AE below:

Manufactured open space (e.g. parks, playing fields, vegetated slopes, green belts, etc.) roads, recreational facilities, water reservoirs, other public facilities and utilities, agricultural and grazing operations are deemed to be compatible when located immediately adjacent to the preserve. No additional buffers or transitional areas are required.

In addition, hiking, bird watching, horseback riding, camping, power boating, water skiing, fishing pet exercising, hang gliding, hot air ballooning, scientific research, mountain biking, equestrian facilities, athletic fields, sailing, sun bathing, swimming, golf courses, hunting, brush management are also compatible uses.

The following guidelines will be used when planning and implementing uses and activities when located immediately adjacent to the preserve. These guidelines are meant to ensure compatibility with the preserve.

- A. Where feasible, plant materials used to landscape manufactured open space, road cut/fills and recreational facilities should consist of native species similar/compatible with the adjacent habitat in the preserve. If possible, those species will be based on plants with genetic materials of the area.
- B. Areas and structures subject to heavy human use (e.g. ball fields, parking lots, hardscapes/playing courts, equestrian centers, staging areas, etc.) shall, to the extent feasible, be located away from the edge of the preserve.
- C. Lighting within 100 feet of the preserve edge shall be confined to areas necessary to ensure public safety, and shall be limited to low pressure sodium fixtures, shielded and directed away from the preserve where possible.
- D. Fencing along the preserve boundary is desirable but not mandatory and may provide a barrier to fire, invasive species, and uncontrolled human access. Should a landowner or preserve manager decide to install fencing, the type, style and height must conform to existing regulations or those included in the Applicable Specific Plan.
- E. There shall be no requirements for buffers outside the preserve system. All open space requirements for the preserve system shall be incorporated into the preserve system."

### 3. Compliance with Otay Ranch RMP-1/RMP 2 Policies

The following discussion describes how the policies identified in the Otay Ranch RMP-1 and RMP 2, and the MSCP County Subarea Plan are met by the various components of the Otay Ranch Resort Village Alternative H Specific Plan.

#### **RMP-1 and RMP-2 Compliance**

The following excerpt from the Otay Ranch RMP-1 and RMP-2, Chapter 3, Goals Objectives, Policies of the RMP is provided to guide the land uses proposed adjacent to the Preserve.

#### ***Objective 7 – Resource Preserve: Adjacent Land Uses***

Identify allowable land uses which are appropriate land use designations for areas adjacent to the Preserve.

#### **Policy 7.1**

All development plans adjacent to the edge of the Preserve shall be subject to review and comment by the Preserve Owner/Manager (POM), the City of Chula Vista, and the County of San Diego to assure consistency with the resource protection objectives and policies.

#### **Policy 7.2**

The "edge" of the Preserve is a strip of land 100-feet wide that surrounds the perimeter of the Preserve. It is not a part of the Preserve – it is a privately or publicly owned area included in lots within urban portion of Otay Ranch immediately adjacent to the Preserve.



Standard: “Edge Plans” shall be developed for all Specific Plan Areas (SPAs) that contain areas adjacent to the Preserve.

Guidelines:

1. The edge plans shall be prepared in consultation with a qualified biologist to ensure that proposed land uses will not adversely affect the resources within the Preserve.
2. The edge plan shall include a list of plant species that may and may not be used for landscaping within the edge.
3. Fuel modification zones may be incorporated into the edge.
4. Development adjacent to the edge shall be restricted to development types that are least likely to impact specific adjacent biological resources.
5. Landscaping or block walls shall be used in appropriate areas adjacent to the edge to reduce impacts of noise and light.
6. No structures other than fencing and walls shall be allowed, and those shall be built and landscaped in such a way as to minimize visual impacts on the Preserve and the Otay Valley Regional Park

**Policy 7.3**

Protect and maintain biological integrity of unconveyed land adjacent to developing SPAs.

Standards:

1. Provide temporary fencing around perimeter sensitive habitat areas and/or areas occupied by sensitive species adjacent to any SPA under construction to inhibit encroachment by construction traffic, etc.
2. Phase construction of SPAs immediately adjacent to sensitive biological resources to avoid indirect impacts. For example, construction activities that equal or exceed volume levels that inhibit breeding and nesting activities of the California gnatcatcher should be curtailed during the nesting period of the bird.

**Section 3.4.1. Preserve Edge**

Development within the 100-foot edge is restricted to uses that are allowed within the Preserve and the following uses:

1. Brush management in order to reduce fire fuel loads and reduce potential fire hazard [7.2].
2. Landscaping that is compatible with open space, as demonstrated by a Preserve Edge Plan [7.2]. No invasive plant species, such as those defined by the California Invasive Plant Council Invasive Plant Inventory, shall be included in the plant palette.
3. Fencing and walls that are built or landscaped in a way to minimize visual impacts to the Preserve and the OVRP. No structures other than fencing and walls shall be allowed [7.2].

4. Trails for passive recreational use. Trails should incorporate fencing or barriers and signage to reduce the likelihood of human intrusion into the Preserve.
5. Detention basins, brow ditches, storm drains, and other drainage features to protect the quality of the adjacent Preserve.

#### **Section 6.4.1. Adjacency Guidelines**

Development adjacent to the Preserve is required to comply with the policies set forth in the GDP/SRP and Phase 1 RMP, as well as the adjacency requirements in the respective jurisdiction's MSCP Subarea Plan. Implementation of the following standards from the Phase 1 RMP for development of SP or SPA Plans adjacent to the Preserve is required to maintain and protect the biological integrity of the Preserve through implementation of the following standards from the Phase 1 RMP:

1. Provide temporary fencing around perimeter of sensitive habitat areas and/or areas occupied by sensitive species adjacent to any SP or SPA under construction.
2. Phase construction that is immediately adjacent to sensitive biological resources to avoid indirect impacts.
3. Development adjacent to sensitive habitats within the Preserve must comply with the set-back requirements in Table 4.
4. Demonstrate compliance with the adjacency guidelines in the County and City's MSCP Subarea Plans pertaining to their respective jurisdiction. These requirements are discussed in further detail below

The intent of the MSCP Preserve and the RMP-1 and RMP-2 relative to the hardline development/preservation areas have been respected. The Otay Ranch Resort Village Alternative H land plan includes a minimum development setback of 100-feet from all residential and commercial land uses regardless of the natural resource within the Preserve.

The Otay Ranch Resort Village Alternative H land plan was created in consultation with the POM, the City of Chula Vista, and the County of San Diego to ensure protection of the resources with the Preserve as outlined in the RMP-1 and RMP-2 objective and policies. The Preserve Edge is 100-feet wide and will be privately owned and maintained in accordance with RMP-1, RMP-2, and the MSCP. The design of the Preserve edge was formulated in consultation with a qualified biologist to ensure the adjacent resources are not adversely affected. This includes crafting a landscape plan that compliments the adjacent Preserve vegetation and implements the County's Fuel modification zones and Fire Protection Plan (FPP) (Appendix II of the Otay Ranch Resort Village Alternative H Specific Plan).

The land uses adjacent to the Preserve have been restricted to those uses that are least impactful to the biological resources within the adjacent areas of the Preserve. Landscaping and block walls have been used to reduce the edge effects related to noise and light and no other structures will be allowed in the 100-foot wide Preserve edge. Prior to initiation of construction activities, a qualified biologist will survey the adjacent Preserve area to determine whether or not sensitive habitat or species are present and to determine the appropriate timing for the construction activities and barriers to protect the sensitive resources in the adjacent areas of the Preserve.

#### 4. MSCP Adjacency Compliance

##### Drainage Measures

The Otay Ranch Resort Village Alternative H site is topographically characterized by hills and ravines aligned in a north-south direction, terminating at Lower Otay Reservoir. Vegetation consists mainly of native vegetation. Run-off from the area drains via incised canyon channels to existing culverts under Otay Lakes Road and then to

the Lower Otay Reservoir. The San Diego Regional Water Quality Control Board (RWQCB) identifies the County of San Diego as a “discharger” who owns or operates a municipal separate storm sewer system (MS4) through which urban runoff is discharged into waters within the San Diego Region.

The proposed drainage system for the Otay Ranch Resort Village Alternative H is more fully described in the *Master Drainage Study for Otay Ranch Resort Village* prepared by Hunsaker & Associates (September 2014) and *CEQA Preliminary Storm Water Management Plan Supplemental Analysis: Otay Ranch Resort Village 13 – Alternative H*, Prepared by Hunsaker & Associates (June 2018). Key components of the proposed drainage system are summarized below and depicted in Exhibit 1 Water Quality Basin Facilities.

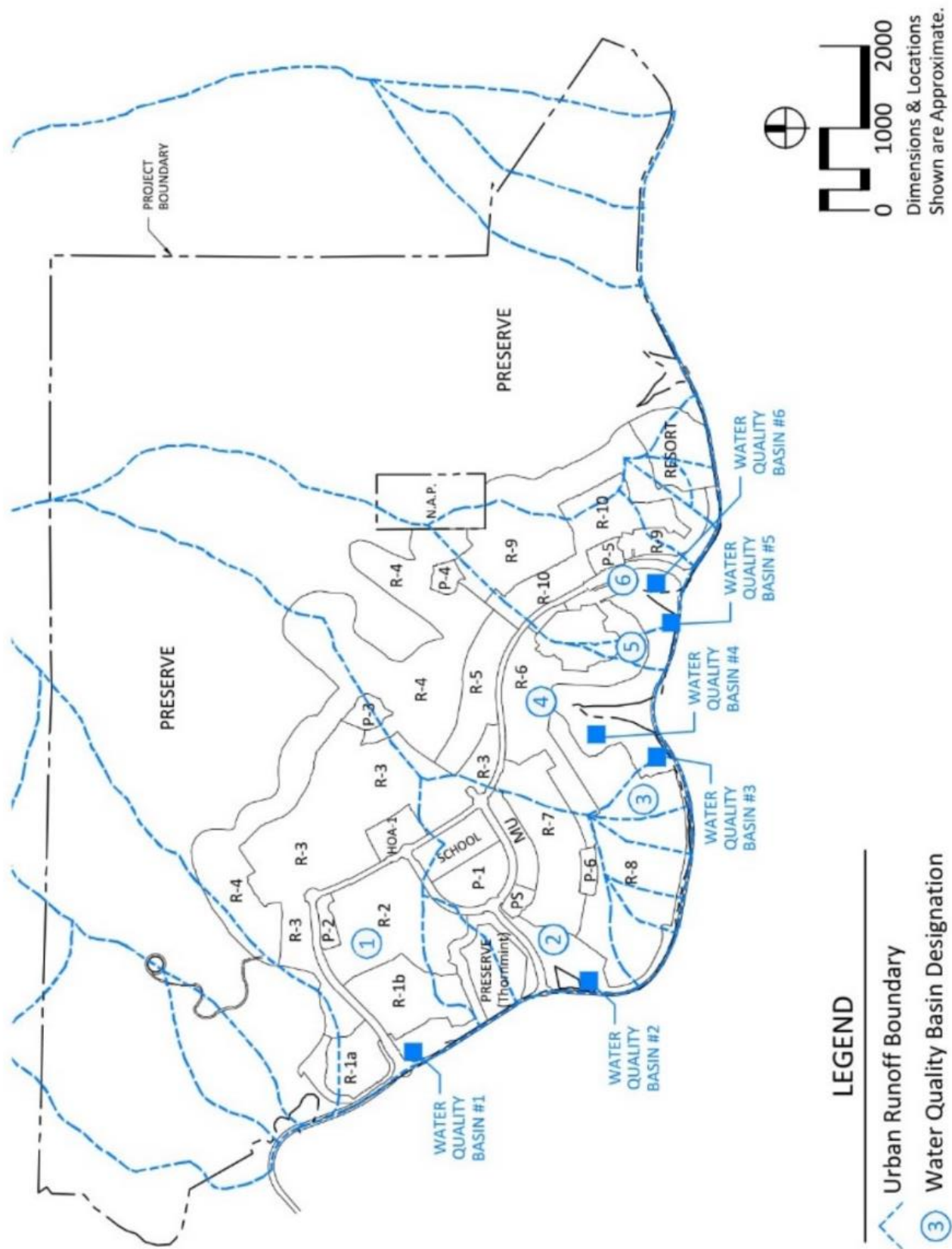
Natural run-off from most areas north of Otay Ranch Resort Village Alternative H site will be separated from the developed site runoff via separate storm drain systems. Thus, run-off from natural (undeveloped) areas would continue to drain directly to the Lower Otay Reservoir, and not mix with runoff from the development until downstream of the proposed water quality basins (after low flows from the development areas have been treated).

To protect the water quality in the Lower Otay Reservoir, runoff from the 85<sup>th</sup> percentile storm will be diverted to six water quality basins and 36 modular wetlands located along Otay Lakes Road. The locations of the bio-retention basins are illustrated in Exhibit 1. These water quality basins will drain slowly to ensure settlement of solids. The basins will be designed to drain over a 24-72-hour period. Low-flow drainage will be treated through grassy swales and will meet all RWQCB requirements prior to discharge.

Run-off conveyed in the storm drain systems will be treated in compliance with RWQCB regulations and federal criteria prior to discharging to natural watercourses. Post construction Best Management Practices (BMPs) refer to specific storm water management techniques which are applied to manage construction and post construction site runoff to minimize erosion. BMPs include “source control,” aimed at reducing the amount of sediment and other pollutants, and “treatment control” aimed at keeping soil and other pollutants onsite once they have been loosened by storm water erosion.

Structural BMPs for the Otay Ranch Resort Village Alternative H will be located to infiltrate, filter or treat the required runoff volume or flow (based on first flush rainfall) prior to its discharge. The BMPs will be designed to reduce toxin, nutrient, and sediment loading of the first flush from the development. Structural BMPs will remove pollutants from urban run-off by simple gravity

settling of particulate pollutants, filtration, biological uptake, media absorption or other physical, biological, or chemical process. Volume-based and flow-based BMPs will be designed to mitigate the volume and maximum flow-rate of runoff produced from a storm event.



**Exhibit 1**  
**Water Quality Basin Facilities**

Maintenance of site BMPs will be the responsibility of the Homeowners Association (HOA) or a county approved maintenance entity. A maintenance plan will include the following information:

- Specification of routine and non-routine maintenance activities to be performed;
- A schedule of maintenance activities; and
- Name, qualifications, and contact information for the parties responsible for maintaining the BMPs.

In addition, the Approved Maintenance Entity will be responsible for notifying residents of activities deemed unlawful by the RWQCB and therefore prohibited in the Otay Ranch Resort Village Alternative H planning area. These prohibited activities include:

- Discharges of sediment, pet waste, vegetative clippings or other landscaping or construction related wastes;
- Discharges of wash water from the cleaning or hosing of impervious surfaces including parking lots, streets, sidewalks, driveways, patios, plazas and outdoor eating and drinking areas. Landscape irrigation and lawn watering, as well as non-commercial washing of vehicles in residential zones is exempt from this restriction;
- Discharges of pool or fountain water containing chloride, biocides or other chemicals;
- Discharges or run-off from material storage areas containing chemicals, fuels, grease, oil or other hazardous materials;
- Discharges of food-related wastes (grease, food processing, trash bin wash water, etc.);
- Discharges of wash water from the hosing or cleaning of gas stations, auto repair garages or other types of automotive service facilities;
- Discharges resulting from the cleaning, repair or maintenance of any type of equipment, machinery or facility including motor vehicles, cement-related equipment, port-a-potty servicing, etc.; and
- Discharges of wash water from mobile operations such as mobile automobile washing, steam cleaning, power washing and carpet cleaning.

In addition to the water quality basins, the RWQCB regulations require that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for development within Otay Ranch Resort Village Alternative H project boundary. The Otay Ranch Resort Village Alternative H SWPPP would address water quality impacts associated with construction and operation of the project. To mitigate impacts from “first flush” runoff and flow, all BMPs identified in the SWPPP would be implemented. The SWPPP will be consistent with the requirements of the federal Clean Water Act and the BMPs of the RWQCB. BMPs identified in the SWPPP will include, but are not limited to the following:

**Construction-Related Measures:**

- Existing vegetation will be retained where possible. To the extent feasible, grading activities will be limited to the immediate area required for construction.
- Temporary erosion control measures will be employed for disturbed areas.
- No disturbed surfaces will be left without erosion control measures in place from October 1 through April 1.

**Design/Post-Construction Measures:**

- Sediment will be retained on-site by a system of sediment basins, traps, or other appropriate measures.
- Where deemed necessary, storm drains will be equipped with silt and oil traps to remove oils, debris, and other pollutants. Storm drain inlets shall be labeled "No Dumping-Drains to Ocean." Storm drains shall be regularly maintained to ensure their effectiveness.
- The parking lots will be designed to allow storm water runoff to be directed to vegetative filter strips and/or oil-water separators to control sediment, oil, and other contaminants.
- Permanent energy dissipaters will be included for drainage outlets.
- The project area drainage basins will be designed to provide effective water quality control measures. Design and operational features of the drainage basins will include design features to provide maximum detention time for settling of fine particles; maximize the distance between basin inlets and outlets to reduce velocities; and establish maintenance schedules for periodic removal of sedimentation, excessive vegetation and debris.

In addition to the permanent drainage facilities, temporary de-siltation basins to control construction related water quality impacts would be constructed within the Otay Ranch Resort Village Alternative H Specific Plan area with each grading phase to control sedimentation during construction. The interim de-siltation basins would be designed to prevent discharge of

sediment from the project grading operations into the natural drainage channel and would incorporate water quality control features to comply with RWQCB 401 Certification requirements. The exact size, location, and component elements of these interim basins would be identified on the grading plans.

**Toxic Substance Measures:**

All agricultural uses, including animal-keeping activities, and recreational uses that use chemicals or general by-products such as manure, potentially toxic or impactful to wildlife, sensitive species, habitat, or water quality, need to incorporate methods on their site to reduce impacts caused by the application and/or drainage of such materials into the Preserve. Methods shall not be in addition to requirements requested by the RWQCB.

The Specific Plan area has phased out agricultural uses adjacent to the Preserve. Future recreational uses will be required to adhere to this policy.

**Lighting Measures:**

The Otay Ranch Resort Village Alternative H Resort Village Design Plan (Specific Plan, Appendix V) includes criteria for the design of lighting for the villages and surrounding streets. Improvement plans for the Otay Ranch Resort Village Alternative H development areas and streets will include shielded lighting designs that avoid spillover light in the Preserve. Lighting Plans and a photometric analysis shall be prepared to illustrate the location of proposed lighting standards and the type of shielding measures. Lighting within the Preserve Edge shall be limited to low pressure sodium fixtures.

**Noise Measures:**

When clearing, grading or grubbing activities occur during the breeding season for the California gnatcatcher (February 15 to August 15, annually) or raptors (January 15 to July 31, annually), nesting bird surveys shall be conducted by a qualified biologist for the San Diego County Department of Planning and Development Services to identify active nest locations. Construction activities shall be restricted or modified such that noise levels related to those activities are below 60 dBA  $L_{eq}$  at the location of the occupied nest site.

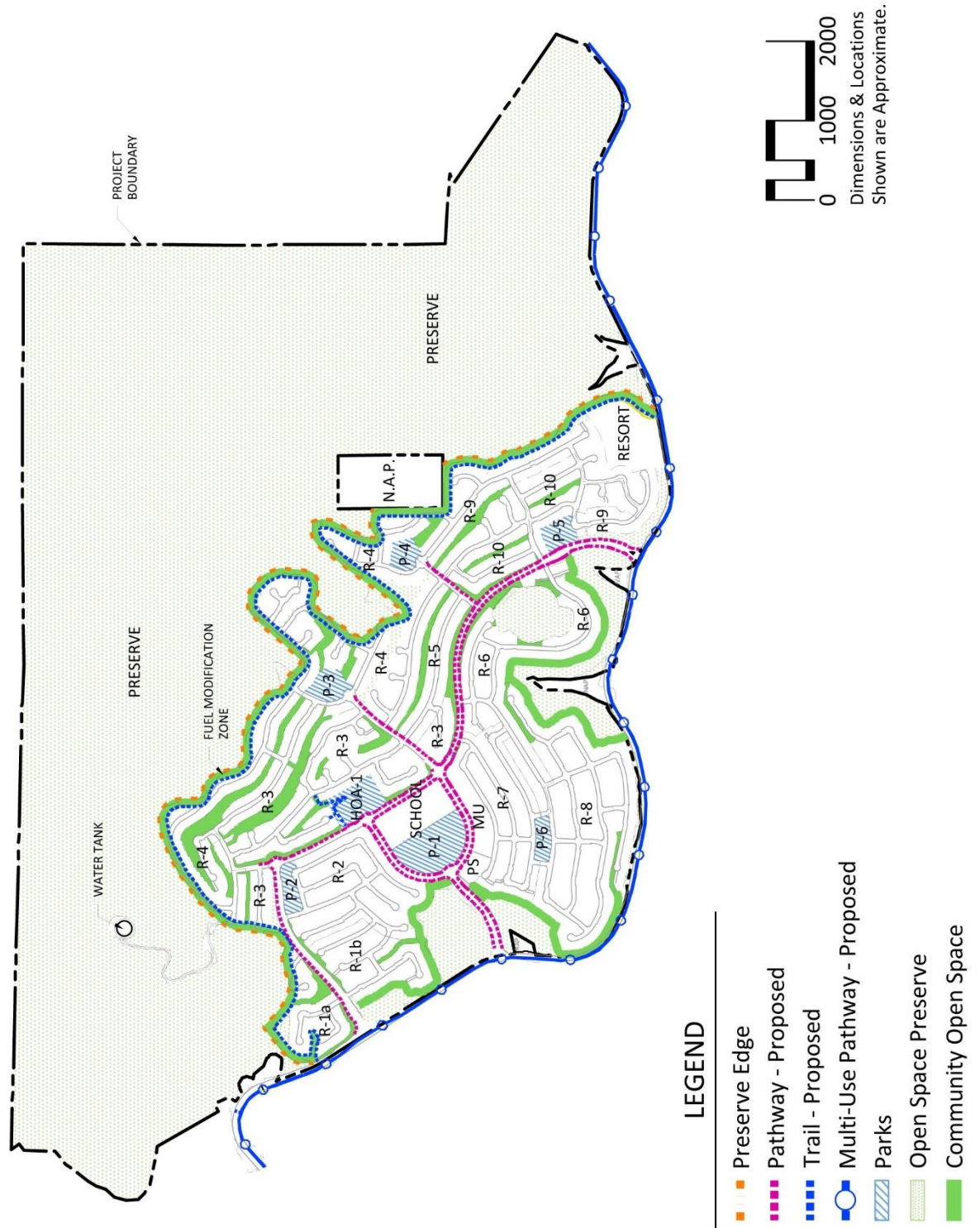
Land uses in or adjacent to the Preserve shall be designed to minimize noise impacts. Berms or walls shall be constructed adjacent to commercial areas and any other use that may introduce noises that could impact or interfere with wildlife utilization of the Preserve. Excessively noisy uses or activities adjacent to breeding areas shall incorporate noise reduction measures or be curtailed during the breeding season of sensitive bird species.

**Trails within the Preserve Edge:**

The Otay Ranch Resort Village Alternative H land plan includes a perimeter trail within the Preserve Edge (see Exhibit 2). The design of the trail shall not extend into the Preserve; however, to the maximum extent feasible, it shall be located within graded areas and/or manufactured slopes. The trail, to the extent feasible, shall be constructed with native materials; however, in some instance, stabilized materials may be needed to limit erosion. Additionally, in a few instances, the trail may be located on the edge of streets to maintain usability.

**Invasive Plant Materials**

Landscape adjacent to the Preserve will not contain any invasive exotic species, as listed by the County and defined by the California Invasive Plan Council Invasive Plant Inventory. Table 1 is a list prepared by a qualified biologist, of species to be planted on manufactured slopes adjacent to the Preserve boundary. The area may be planted with container stock (liners) or hydro-seed mix. If possible, these species should be based on plants with genetic materials of the area. This meets the requirements outlined in the Fire Protection Plan (FPP) as these manufactured slopes are also within the 100-foot brush management zone required by the MSCP. Any changes to the plant species listed below must be approved by the County and San Diego County Fire Authority (SDCFA).



**Exhibit 2**  
**Preserve Edge and Land Use Plan**



**Table 1: Approved Plant List for Manufactured Slopes Adjacent to Preserve Boundary****Trees:**

Ceratonia siliqua	Carob Tree
Gerijera parviflora	Australian Willow
Quercus agrilolia	Coast Live Oak
Quercus suber	Cork Oak
Rhus lancea	African Sumac
Tristania conferta	Brisbane box

**Shrubs & Groundcover:**

Cistus species	Rock Rose
Dalea orcuttii	Baja Indigo Bush
Echium fasstuosum	Pride of Madeira
Heteromeles arbutifolia	Toyon
Rhamnus californica	California Coffeeberry
Rhus lentii	Pink Flowering Sumac
Rosmarinus officinalis	Rosemary
Salvia mellifera	Black Sage
Sambucus species	Elderberry
Archtopstaptylos 'Emerald Carpet'	Emerald Carpet Elderberry
Baccharis pilularis 'Twin Peaks'	Dwarf Coyote Bush
Ceanothus maritimus	Maritime Ceanothus
Epilobium californicum	California Fushcia
Mimulus auranticus	Monkey Flower

**Succulents:**

Agave attenuate	Desert Century Plant
Agave shawii	Coastal Agave
Yucca schidigera	Mojave Yucca
Yucca whipplei	Foothill Yucca

**Hydroseed Mix:**

Dichelostemma capitatum	Wild Hyacinth
Distichlis spicata	Salt Grass
Dudleya edulis	Lady's Fingers
Dudleya pulverulenta	Chalk Dudleya
Lasthenia californica	Goldfields
Layia platyglossa	Tidy Tips
Lupinus bicolor	Miniature Lupine
Sisyrinchium bellum	Blue-Eyed grass

**Fuel Management Measures:**

A 100-foot Fuel Modification Zone (FMZ) /Preserve Edge along with a 20-foot wide rear or side yard FMZ has been incorporated into the proposed development areas of the Otay Ranch Resort Village Alternative H Specific Plan pursuant to the requirements of the MSCP County Subarea Plan. No fuel modification activities will occur within Otay Ranch RMP Preserve areas.

Where appropriate, graded landscaped slope areas will be maintained pursuant to SDCFA requirements and will be outside of the Otay Ranch RMP Preserve. Where a cut slope condition results in the Preserve boundary adjacent to rear yard areas, the following methods, either alone or in combination, may be employed to meet SDCFA requirements without resulting in brush management activities encroaching into Otay Ranch RMP Preserve areas:

- 1) the use of masonry walls, or barriers comprised of other acceptable fire-resistant materials;
- 2) setback requirements for structures and other combustible appurtenances (per Otay Ranch Resort Village Alternative H Specific Plan);
- 3) access for maintenance and fire protection activities will be provided every 1,000-feet along the perimeter of the Otay Ranch Resort Village Alternative H development area.
- 4) fire sprinklers; and/or
- 5) architectural design features that minimize fire risk.

Where the edge condition involves streets and/or front yard areas adjacent to Otay Ranch RMP Preserve areas, hard surface and irrigated landscaped areas would serve as wildland fire buffers, in accordance with any specific requirements of the SDCFA.

**Zone A**

**Definition:** All public and private areas located between 50 feet and 100 feet from the edge of the natural open space/Preserve edge. These areas may be located on public slopes, private open-space lots, public streets and/or private yards, as defined in the landscape brush management exhibits.

**Zone A - Specific Criteria:**

- This irrigated wet zone shall be serviced by a permanent automatic irrigation system.
- No tree limb encroachment within 10-feet of a structure or chimney, including outside barbecues or fireplaces.
- Minimum 10-feet between tree canopies.
- Tree maintenance includes limbing-up (canopy raising) 6-feet or one- third the height of the tree.
- Additional trees (excluding prohibited or highly flammable species) may be planted as parkway trees on single-loaded streets, pursuant to the planting plan provided in the Otay Ranch Resort Village Alternative H, FPP.
- 75% of all groundcover and sprawling vine masses shall be limited to a maximum height of eighteen

- 25% of all groundcover and sprawling vine masses may reach a maximum height of twenty-four inches.
- Ground covers must be of high-leaf moisture content.
- Shrubs shall be less than 2-feet tall, 5-foot on-center.
- Randomly place approved succulent type plant material may exceed the height requirements, provided they are spaced in groups of no more than three and a minimum of 5-feet away from described "clear access routes."
- Vegetation/Landscape Plans shall be in compliance with the Otay Ranch Resort Village Alternative H FPP.

### **Zone B**

**Definition:** All public and private areas 50 feet wide located between the outside edge of Zone A and the natural open space/Preserve edge. These areas may be located on public slopes, private open- space lots, public streets, and/or private yards, as defined in the landscape brush management (see Exhibits 3 and 4).

### **Zone B - Specific Criteria:**

- Represents a 50% thinning zone – 50% less fuel than on adjacent unmaintained preserve areas.
- All manufactured slopes within this area shall be serviced by a temporary automatic irrigation system which will be turned off once the plantings are established.
- Trees may be located within this zone, provided that they are planted in clusters of no more than three. A minimum distance of no less than 20-feet shall be maintained between the tree cluster's mature canopies. The trees will be limbed up to maintain vertical separation from understory shrubs.
- Only those trees on the County of San Diego's "Suggested Plant List for a Defensible Space" and those approved by the biologist shall be allowed within this zone.
- 75% of all groundcover and sprawling vine masses shall be limited to a maximum height of 36-inches.
- 25% of all groundcover and sprawling vine masses may reach a maximum height of 48-inches.
- Randomly placed approved succulent type plant material may exceed the height requirements, provided that they are spaced in groups of no more than three and a minimum of five feet away from described "clear access routes."
- Single specimen native shrubs, exclusive of chamise and sage, may be retained, 20-foot on-center.

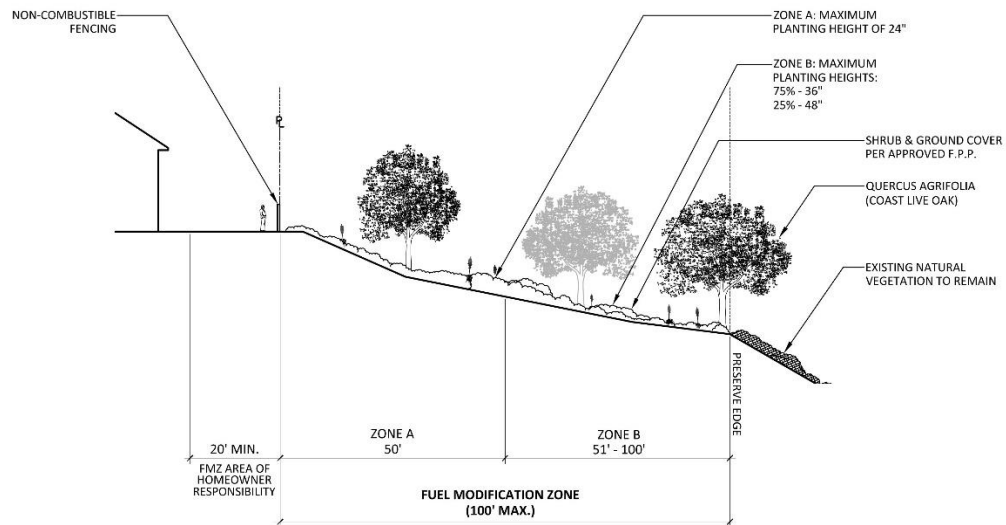
A more detailed description of the Fuel Modification Zone, including maintenance activities, planting programs, etc. is provided in the Otay Ranch Resort Village Alternative H FPP. A portion of Zone 1 may be incorporated into streets, parks and other areas, as appropriate. Any proposed changes in the Fuel Modification Zone are subject to approval by the Planning and Development Services Director and the SDCFA.

The 100' Preserve Edge coincides with the 100-foot Fuel Modification Zone in portions of the Development Area. Where the edge condition involves streets adjacent to the RMP Preserve, hard surface and irrigated landscaped

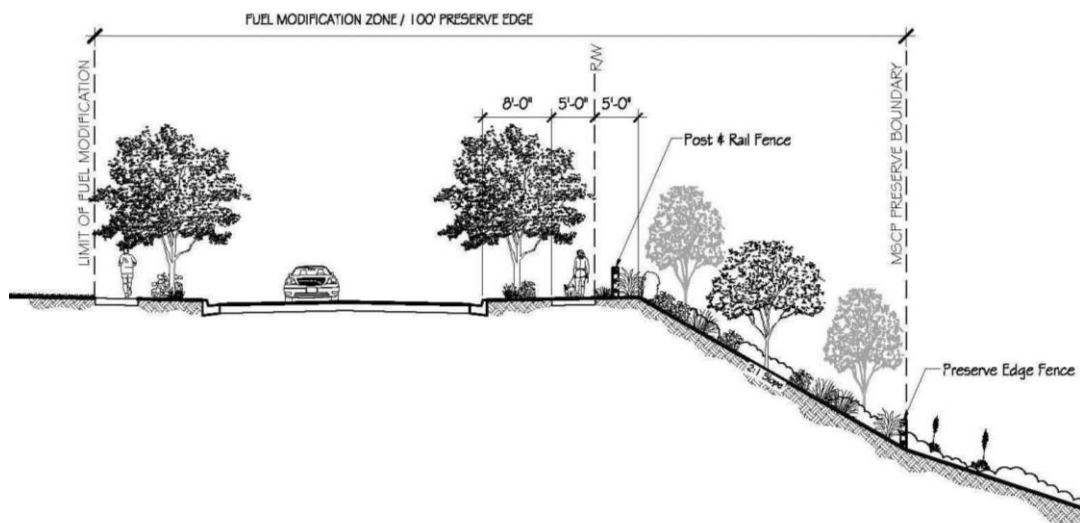
areas would serve as wildland fire buffers, in accordance with specific requirements of the Otay Ranch Resort Village Alternative H FPP.

The irrigation design proposed for the Preserve Edge includes permanent irrigation within Fuel Modification Zone A (0-50 feet) and temporary irrigation in Zone 2 to ensure the establishment of vegetation intended to stabilize the slope and minimize erosion. Temporary irrigation is described below.

Zone B (51 – 100 feet) would be irrigated with above ground irrigation lines utilized only during plant establishment using sprinkler heads that spray 360 degrees. When the plants have become established, the sprinkler heads will be adjusted to provide adequate coverage within the upper 50 feet (Zone 1) of the slope.



**Exhibit 3**  
**Fuel Modification Zone at Preserve Edge (Residential)**



**Exhibit 4**  
**Fuel Modification Zone at Preserve Edge (Road)**

**OTHER VEGETATION MANAGEMENT****Roadside Fuel Modification Zones (Including Driveways)**

- High BTU producing, flammable vegetation including shrubs and trees shall be cleared and are prohibited.
- Tree and shrub canopies shall be spaced such that interruptions of tree crowns occur and horizontal spacing of 20-feet between mature canopies of trees or tree groups is maintained.
- Grass shall be mowed to 4-inches.
- Single tree specimens, fire resistive shrubs, or cultivated ground cover such as green grass, succulents or similar plants used as ground covers may be used, provided they do not form a means of readily transmitting fire.
- All roads in the development will have vegetation clearance of flammable vegetation on each side, as follows:
  1. Fire Access Roads – 20-feet from edge of pavement.
  2. New roads/driveways – 20-feet from edge of pavement.
  3. Existing roads/driveways – 20-feet from edge of pavement. EXCEPTION occurs where the preserve is at the edge of an existing road, such as Otay Lakes Road where fuel modification may not be consistent with preserve management directives. However, in an effort to minimize the likelihood of road related activities triggering an Otay Ranch RMP Preserve wildfire, an HOA or Community Facilities District-funded maintenance district would provide ongoing maintenance for fuel management consistent with Code requirements and habitat management directives.
- Trees may be placed within the Roadside Vegetation Management Zones. The following criteria must be followed:
  1. Tree spacing to be 20-feet between mature canopies (30-feet if adjacent to a slope steeper than 41%).
  2. Trees must be limbed up one-third the height of mature tree or 6-feet, whichever is greater.
  3. No tree canopies lower than 13-feet 6-inches over roadways.
  4. No tree trunks intruding into roadway width.
  5. No trees or other plants on the Prohibited Plant List (Appendix I) are permitted.
  6. No flammable understory is permitted beneath trees.
  7. Any vegetation under trees to be fire resistive and kept to 2-feet in height or below, and no more than one third the height of the lowest limb/branch on the tree.

**Trail Vegetation Management**

- Trail maintenance shall occur on the trails to remove flash fuels and maintain the trail in a useable, low fuel condition.

**Parks, Open Space, etc.**

- Landscaping within parks and open space areas will be in compliance with the guidelines in this plan, the Otay Ranch Resort Village Alternative H, Specific Plan and Appendix V, Resort Village Design Plan.
- Flammable vegetation must be removed and is prohibited.
- Grasses must be maintained/mowed to 4-inches.
- Types and spacing of trees, plants, and shrubs, to comply with the criteria in this plan.
- No plants in the Prohibited Plant List (Appendix II, Fire Protection Plan) are permitted in this area.
- Down and dead vegetation will be removed as observed.
- Trees to be properly limbed and spaced and from approved, fire resistive plant list.

**Vacant Parcels and Lots**

- Vegetation management will not be required on vacant lots until construction begins. However, perimeter Vegetation Management Zones must be implemented prior to commencement of construction utilizing combustible materials.
- Vacant lots adjacent to active construction areas/lots will be required to implement vegetation management if they are within 30-feet of the active construction area. Perimeter areas of the vacant lot shall be maintained as a Vegetation Management Zone extending 30-feet from roadways and adjacent construction areas.
- Prior to issuance of a permit for any construction, grading, digging, installation of fences, etc., the 30-feet at the perimeter of the lot is to be maintained as a Vegetation Management Zone.
- In addition to the establishment of a 30-foot-wide vegetation management zone prior to combustible materials being brought on site, existing vegetation on the lot shall be reduced by at least 60% upon commencement of construction.
- Dead fuel, ladder fuel (fuel which can spread fire from ground to trees), and downed fuels shall be removed and trees/shrubs shall be properly limbed, pruned and spaced per this plan.

**Waterline and Storage Tank Maintenance/Access Road**

- The maintenance and access road is proposed within the 100-foot Preserve Edge along the northwestern edge to access the planned Otay Water District g8o Zone waterline and storage tank. The road is graded to a 20-foot width with an 18-foot paved asphalt surface and two-foot shoulders on each side. A security gate will be installed at the access drive in neighborhood R-4. The waterline will be co-located within the paved roadway easement. Roadway slopes must be planted with non-invasive, native plant materials, consistent with the existing and surrounding natural vegetation (refer to Table 1 - Approved Plant List, noted above).